

Reclaiming *the* West



An address by
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Reclaiming the West

SOME millions of words have been spoken on the subject of the drouth menace in the west in the past year. My own contributions to the discussions of the subject in the form of the written word now I think approximate 70,000 words, and yet they are only a drop in the bucket so far as the general discussion of the subject is concerned. It is a great flood of words.

And yet I offer no apology for coming before this audience to speak on this subject. My excuse and justification are the magnitude of the problem we are facing. In my conception it is the greatest challenge this country has ever faced—the greatest challenge to our resourcefulness, our courage, our imagination, and in fact to all the qualities of hearts and mind of the whole people of Canada. It is the greatest challenge because it is the greatest menace to our continued economic prosperity and progress.

Just what the problem is, as well as what should be done about it, is now the subject of acute controversy both in the west and elsewhere—controversy no less acute because it is carried on in the politest possible manner, with all parties to it recognizing the high-minded purpose of all other parties.

There has arisen to some degree a confusion of thought in regard to it. To some points in the controversy I shall refer later.

May I state my own point of view simply: I still believe we are in grave danger of creating a Canadian desert embracing a large area of the most productive lands in the west. That will not be brought about in a year or two years, but it will come, to use the old Scottish phrase, as sure as death, if measures are not taken to prevent it.

I believe that fully and completely, after having carefully studied all the evidence brought to light on this subject, and all the arguments and reasoning of those who dis-

count the menace and suggest that conditions, if left alone, will right themselves.

Danger in Optimism

Everyone as a matter of course would like to believe that the present condition of the prairie provinces is a temporary disability. It is much the more cheerful point of view, and the western people as you know are born optimists. But to my mind the evidence is far too direct and altogether too overwhelming in its implications to permit ourselves to be betrayed by any such easy optimism. Merely pointing out that we have had drouths before, and that they have passed away is no answer to our present position.

Go back a hundred years, and you will find evidence of recurring drouth periods in the large area described by Palliser and Hind in their 1860 survey as the Canadian desert. But the point which any unbiased student of western conditions will seize upon is the fact that drouths are becoming much more frequent and much more severe. And that is the real answer to those who say that a little rain will correct the whole difficulty. As a matter of fact, normal or average rainfall over a large section of the west is now not sufficient to produce a crop, and that fact vastly increases the danger of our situation.

The evidence of the peril of our present position is conclusive. Our choice is clear. We can drift along in easy optimism and eventually see 20,000,000 acres of the finest hard wheat land in the world abandoned to the sow thistle and the gophers; or we can work and plan and reclaim for our sons and daughters the great and productive land our fathers opened up for us.

The winning of the west was a great achievement. As a people we do, I think, rather less than full justice to the hardihood and courage of those who opened it up — probably because we are still too close to their achievement, and many of the pioneers are still with us. But today we have a task before us to my mind comparable to theirs, in its demand upon us for vision and determination and resourcefulness. The reclaiming of the west will not be easily or speedily accomplished.

Farms Out of Commission

Let us take a glance at the problem as it exists. I will not bore you with many statistics.

The simple fact is that this year 87,000 farms are out of commission, more or less — 67,000 in Saskatchewan, 7,000 in Manitoba.

and 13,000 in Alberta. Most of them have been out of commission for at least three years, some of them for four years, some even for five years. Roughly, the area of the drouth covers 18,000,000 acres. It has an ordinary production in new wealth annually of from \$150,000,000 to \$200,000,000. Its production has been as high in value as \$400,000,000 or more.

Think for a moment what that means in terms of the prosperity of the country at large. Or more directly if you prefer in terms of the prosperity of western towns and cities. It has created conditions of exceptional severity because, of course, it came on top of the world-wide depression.

Illustration in Story

For the west it was piling woe on woe. We have suffered all "the slings and arrows of outrageous fortune." I think I might interrupt the thread of my remarks long enough at this point to tell you a story Irvin Cobb relates, of a very devout man, a farmer in the south. It has some little application to the point we are discussing.

The farmer was a very devout man, who prospered greatly, and who on all occasions returned thanks to the Almighty for the blessings bestowed upon him. Then misfortunes began to come his way. His hogs contracted cholera and had to be shot. His cattle developed the hoof and mouth disease and had to be disposed of. Lightning struck his barn and burned it down, just the day after the insurance has expired. His crops failed. His wife ran away with the hired man. His daughter eloped with a saxophone player. His son went to jail after forging his father's name to all the remaining cash in his bank account. The sheriff came and foreclosed, and the farmer went to the poorhouse. And yet on each of these calamitous events, he humbly returned thanks to the Almighty for the blessings bestowed upon him and for the trials he was called upon to suffer. And then one day on the poorhouse farm he was plowing, with a team of fine horses. Out of a clear blue sky came a bolt of lightning. It stretched the horses dead upon the ground. It melted the plowshare to a ball of shapeless metal. It knocked the farmer unconscious, ripped the soles off his boots and the clothing from his body. After a time he came to, smelled the odor of burning flesh, gazed upon the wreckage of the plow, and then in his devout way, turned upon his knees to render his humble thanks to the Almighty. And as he bowed his head

and began "Oh Lord," the worm turned. Suddenly he straightened up his head and looking up at the sky said "Oh Lord, this is getting to be plumb ridiculous."

What with the depression and the drouth, the west's difficulties have almost reached the "plumb ridiculous" stage. However, we have some reason—in rising wheat prices and other factors—for belief that from now on our skies will brighten. But that does not lessen our need of doing something about this problem of drouth.

Conserve the Moisture

Now drouth of course is due primarily — not wholly but primarily—to a deficiency in rainfall. Let us admit, frankly and at once, that very little man can do will have any effect in the way of increasing rainfall. Some Russian experiments, and others elsewhere, do suggest that trees have some slight effect in increasing rainfall in the immediate vicinity of forests, but in any event that is a minor interest. We cannot solve the drouth problem by any effort to increase rainfall. Rather our efforts must be directed toward conservation of the moisture we can count on. It is in this direction that the greatest errors have been made in the past in western Canada. And in this direction our plans for rehabilitation of the drouth area must be developed.

Let me make one point before we consider possible measures to overcome the drouth in the west. That this western country of ours was semi-arid land has been known from its very beginning. The Palliser and Hind surveys in 1860, to which I have already referred, marked out what was "the Canadian desert." Subsequent drouth periods marked it out on several more recent occasions. It was known, but it was forgotten. Years of ample rainfall, made the semi-arid land blossom like a garden. In the short space of 40 years, and more especially in the two decades following the turn of the century, man came in and plowed up the whole surface of the land—plowed and planted wheat, and wheat again, and more wheat.

Pay Penalty Now

Year after year of greater than normal rainfall left the country increasingly subject to drouth. There was no pretense of conserving moisture against the dry years. On the contrary, sloughs were drained and all the land plowed. Even good-sized lakes were drained to provide more land to till. Everything possible was done to expedite the spring run-off. Few trees were planted to break up

the drying winds. We have been planting a few trees, so we think we have done something about tree-planting in the west, but if we look over to England and realize that in the last 10 years 450,000,000 trees have been planted in that tiny little island, we can realize how far short we have fallen on any forestation program in western Canada. In Russia 20,000,000 acres have been set out in trees since the beginning of this century.

Pasture and hay lands were simply not-existent or almost non-existent. I have seen stretches of 50 miles in southern Saskatchewan where every inch of land to be seen, except for the site of the actual farm buildings, was under the plow and the harrow. Tremendous evaporation under these conditions occurred as a matter of course. There was hardly a square foot of the countryside that was not plowed up and rendered subject to the drying forces of the wind and the sun.

And the sun, it is to be noted, has been gradually becoming a greater force in evaporation than formerly in the west. The weather bureau figures that the normal temperature over the prairies has increased by several degrees during the past 50 years. I have no doubt whatever that this is partly due to the absence of cooling surfaces, so many of which we have destroyed in the west.

In this sense we have been burning our candle at both ends. A difference of two degrees in the summer heat means a tremendous difference in the amount of evaporation.

Should Know Better

We should have known this was no way to treat semi-arid land. The farming experience of the whole world should have taught us better than that. We should have known enough to build up reserves of water in every way we could. We should have known enough to impound the water in the spring for stock and for hay and grass lands. We should have known enough to build up reserves of feed for stock. We should have built our farming practices in the knowledge that any summer might bring deficient rainfall. We should have been planting trees, when there was moisture enough to get them started.

We did know that these were semi-arid lands, but we had forgotten. Even the recurring drouth periods didn't cause the alarm which they should have. We relaxed in the comfortable assurance that rains would come again, whereas we should have been warned that drouth would come again.

It has taken this last five-year drouth to really open our eyes, and even today there

are some so-called experts who keep on insisting that it is a passing condition. It is in one sense. Rain will come again, and the drouth area will blossom with rich productivity.

But drouth also will come again. More lasting and more drastic, and will come more frequently, until the western plains will have to be abandoned, unless we set to work to rectify our errors of the past and do what we can do to mitigate the effect of drouth in the future. I am optimist enough to believe that we can eventually take this country out of the semi-arid category, that we can by conserving all our resources in the way of moisture, get over the dry years that will come with a minimum of loss and put the agriculture of the plains area on the basis of real stability. But stability is far in the future—10 years away, at least.

Now as to measures of coping with this condition, let me say at once that I am not a climatologist, I am not a hydrographic engineer, not an agronomist, not a soil expert, and not a scientific forester. I emphasize these things for a reason. We have been hearing from representatives of these professions in the west of late, and some of them, while properly emphasizing the contributions their own particular professions can make toward a solution of the drouth problem, have been inclined to be a little bit scornful of the contributions others can make. And that is not a good thing. In fact it is definitely a bad thing.

Need All Experts

There is unquestionably need for example for the services of Dean Shaw, of the college of agriculture in Saskatoon, in work towards a solution of the problem. But I am not inclined to take Dean Shaw's word for it that the engineer and the forester have nothing to offer. I venture to think there is a place also in this work for T. C. Main, for example, who has spent the greater part of a lifetime studying water tables and hydrographic conditions in the west. And the scientific forester certainly has his place in the picture. The Pearce plan cannot be ruled out of consideration without study and investigation and neither can the farseeing suggestions advanced by Major Duncan Stuart.

Personally I am convinced, weighing all the evidence and opinions I have been able to gather from experts of all sorts, that dams and trees are going to play a very large part in the rehabilitation of

the west. But I am as firmly convinced on the other hand, that changes in agricultural methods are necessary, that some of the land in the southern parts of Alberta and Saskatchewan must go back to range land, that new drouth resistant grasses must and can be developed, and that in general the agricultural experts of all kinds have a very great part to perform in the rehabilitation of the west.

So far as dams and trees are concerned, I cannot pass over the opinions of capable engineers who have studied the subject. I would refer you for example to the fine report from Saskatchewan waterways prepared by T. C. Main, water engineer of the Canadian National railways. No one, I am sure, could read that report and fail to be convinced that the engineer, as well as the agricultural expert, can play his part in the rehabilitation of the drouth area. And what is the answer to be made to the forester, who comes along and points out that the Prince Albert area, for example, with its millions of trees to break the force of the wind and reduce evaporation, produced a heavy crop of wheat in 1934 on only an inch or two more rainfall than southern districts which produced no wheat at all.

Need Many Dams

Let me quote you the observation of O. W. Roberts, government meteorologist at Bismark, North Dakota, who is no pessimist. He says he expects normal rainfall next year, and with normal rainfall North Dakota will grow crops in spite of the handicap of drouth conditions over five years. But he would not depend upon rainfall alone. There is certainly another remedy.

"It would consist of innumerable small dams to impound the run-off waters, particularly the spring floods," says Mr. Roberts. "We should have them and they can be had. The Civilian Conservation commission and the North Dakota Game and Fish authorities are building them now. These small reservoirs would moisten our soil against any real drouth conditions. I know of no other way to build against drouth."

Let me quote briefly from Morris Markey, well-known writer on economic subjects who has been touring Dakota, Montana and Minnesota. Speaking of the American drouth area, he says even abnormally heavy rainfall may not solve the water problem for the northwestern farmer. This drouth area, like our own, was never a uniform plain. From

the beginning it was crossed and recrossed by lower areas in which water settled, making marshes, ponds and even small lakes. The farmers, like our own, thought of the land underneath, and with energy that might have been extended upon a better cause they drained everything. They not only laid down ditches and tiles to take off the lingering moisture, they built huge sluices to carry off the water from melting snows.

"The upshot is obvious," says Mr. Markey, "tons and tons of water are deliberately removed every year from land that has barely enough water to support plant growth. Surface evaporation is at a maximum, and anything less than the full normal precipitation in any year spells trouble.

"There is a wide opinion among experts weather bureau people and college deans that the country might yet be saved for agriculture if all the drainage ditches are blocked up, if dams are built across the low coulies to hold back reserves of water that would drain off naturally, if trees are planted generously in all directions. For trees they demonstrate absorb great quantities of water which the ground may draw back again in case of need."

Trees Aid Russians

Are trees useless? Let me call attention to a report of the Soviet government. In Russia a considerable area was planted with trees in 56-foot strips, 700 feet apart. Rainfall in the area of these forest strips was carefully checked against rainfall in surrounding untreed areas.

The results were astonishing. In five years, 1918-1922, the extra rainfall between the forest strips was from 1,000 to 11,000 cubic feet per area. The increase in rainfall in the area bordered by the forest strips was from 13 percent to 27.2 percent. Not only do trees bring precipitation, however, they conserve moisture. In the treed areas the evaporation between the forest strips was from 20 to 35 percent less than in the open.

In a drouth year the yield of rye between the forest strips was 90 percent greater than in the open, and of oats 147 percent. In a year of more normal rainfall the increase was 13.6 percent for rye and 10.3 percent for oats. Thus the trees, an advantage in normal years, were a veritable blessing in drouth years.

May I quote also J. B. Kinzer, chief climatologist of the weather bureau at Washington. He says, "Man has contributed very

materially to the damaging effects of the great plains drouth through extensive cultivation where it never should have been practiced. The greater area of loose, pulverized soil exposed to the wind, the more extensive and damaging will be soil erosion and dust storms during drouths. The answer here is fewer cultivated fields; more natural vegetation; more grass lands without too close grazing, and any device that would diminish the surface velocity of the wind and conserve soil moisture."

As I say, I am not an expert on any of these questions. But it seems to me, just as a matter of common sense, altogether likely that if you impound water wherever it can be impounded, and plant trees wherever there is water to make them grow, and keep on patiently working in that direction for some years, eventually you are bound to create conditions that will help to overcome drouth.

Water Available

Mr. Main reports that even in the driest years, if the spring run-off were impounded, there is water enough in the southern part of Saskatchewan to keep all the lakes and rivers at a considerably higher level than they now normally have, and to keep an even quantity of water flowing down the rivers and creeks every month in the year. Isn't it common sense to keep that water in the country, isn't it common sense to believe that some good use can be found for it?

There is really no reason why anyone should be engaged in quarreling or disputing about this subject. It is quite big enough to enlist the activity and the support of everyone who feels called upon to render any public service in connection with it. There is room for the climatologists and the agronomists and all the others, all to take their part, all to give what they have to give, all to work together in order that the best solution may be found. My appeal to you as citizens of the west is to be open-minded on the subject and to give your hearty support to any and all plans which will lead to careful study of the whole problem and eventually to considered action.

This is in fact the great merit of the plan Premier Bracken has indicated he will lay before the three provincial governments in the conference to be held next week. He is proposing the organization of committees of experts on such subjects as climatology, soil sur-

veys, water tables, forestry, farming methods and so forth, to gather and correlate the best available information on all of these questions.

In the employment of the dominion government and of the three provincial governments, and on the staff of the three provincial universities, are experts on all these questions, and with the co-operation of Premier Bennett, who is fully seized with the importance of the problem, they can all be made available.

In three months' time the information on which a permanent program of reclamation work can be based should be made available. That is the statesmanlike way of getting at a problem far too extensive and complicated in nature to be either the subject of jealous controversy or left to be dealt with haphazard.

Asks Public Support

I would like to suggest to the people of the west that so far as government action is concerned they give their wholehearted support to this proposal, which I have no doubt will commend itself to the premiers of the three provinces and to Mr. Bennett.

There is another suggestion I want to leave with you. We in Winnipeg are forming a Canadian Conservation Institute, or rather what we hope will be the Winnipeg branch of a Canadian Conservation Institute. Its purpose will be to enlist the best brains of the community in a campaign to combat the drouth menace. It will have two particular objects. To organize and create a sound public opinion upon this question, and to study and develop lines of attack upon the problem.

It is not formed with the idea of bringing pressure to bear upon governments, but rather to uphold and support the action the governments are planning to take, and to bring public opinion along in support of an intelligent and well-directed attack upon the problem. Many of the most prominent citizens of Winnipeg have been enlisted as officers and advisers of this organization, and if I had time I would like to read extracts from some of the letters which they wrote in approving of the organization and promising their support.

I think I can say to you that every responsible business leader in Winnipeg and every leading professional man is thoroughly seized of the importance of this question, fully realizes that the interests of the entire west are bound up in it, and is prepared to make some sacrifice of time and energy in order

to bring about a vigorous and persistent effort to cope with it. There is realization, too, that organization is especially desirable because of the need of keeping public opinion alert on this question, not for a year or two, but for at least 10 or possibly 20 years to come. No matter how much money is made available, it is impossible to carry out the rehabilitation of the drouth area in a year or two. The aim in view should be at least a 10-year plan, and it may be necessary to extend it over a score of years.

The danger is that if one year brings a big crop, the importance of measures to combat drouth will be minimized in the public mind, and the work left undone. That is what we regard as possibly the most important purpose of the Conservation Institute, to keep alive interest in the question through wet years and dry until the big task has been accomplished. I hope to see branches of this Conservation Institute established in every city and town in western Canada. I feel sure that they will serve a great national purpose.

You here in this northern area may think you are immune from drouth, or at least from its most drastic effect. Under present conditions I think you are, and certainly everyone will hope you are. Yet the drouth area is unquestionably expanding and no man knows where the line may be drawn. Certainly in any case it is sound business for you to assist in working out sound policies of conservation for the southern section, and to apply them here, too.

Danger in Plenty

I have seen recently the statement that through rapid destruction of trees and drainage work, conditions of southern Saskatchewan were being produced even in the Peace River district. We should know by this time that nowhere in the west is there any real surplus of moisture, and that it is only common sense to plant trees, conserve those we have, and hold as much of the run-off water as we can against possible dry years.

I said in the beginning this drouth menace was a challenge to our resourcefulness. That is obvious. There is no easy road, no royal way, to overcome the difficulties. Yet they must be overcome. We have here an asset of incalculable value, and it can be made to produce and give a steady living, and a high standard of living, to a hundred thousand farm families, and twice that number in years to come. Today it is desolate, and

we have had to pour in \$50,000,000 just to keep these farm families alive.

I said it was a challenge to our courage. That again is obvious. If you travelled over the drouth area in the past three or four years, you will readily admit it will take courage to tackle the job of reclaiming it. It requires also determination and steadfastness, to remember if wet years come, as they will, there can be no slaekening of efforts towards permanent rehabilitation. Only if it is carried on through wet years as well as dry can a reclamation program succeed in its purpose.

It requires finally imagination, in no small measure, to invision the goal to which we must work—to see these plains, desolate as they have been for several years now, as a settled, prosperous, stabilized farming community, living in a land dotted with lakes and ponds, surrounded by treed areas, a green and pleasant land as it was in days we can all recall. I believe all that can be aecomplished. I believe we can make this, comparatively at least, a sure erop country. The Canadian people have the qualities of heart and mind that will enable them to go through with this great task, once their interest is aroused and they are convinced of its practicability. And so I ask your interest and your help in this rewinning of the west.



